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YU et al.(10) **Pub. No.: US 2017/0102996 A1**(43) **Pub. Date: Apr. 13, 2017**(54) **RAID CONTROLLER DEVICE AND  
STORAGE DEVICE CONFIGURED TO  
RECOVER DATA HAVING  
UNCORRECTABLE ECC ERROR**(71) Applicant: **Samsung Electronics Co., Ltd.**,  
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**3/0683** (2013.01)(57) **ABSTRACT**

A redundant array of inexpensive disks (RAID) controller of a RAID storage system that includes one or more storage devices includes an error correction code (ECC) result manager configured to manage information of ECC result indicators when a data chunk that includes one or more ECC data units having an uncorrectable ECC error is read from among a plurality of data chunks dispersively stored in the one or more storage devices, each of the plurality of data chunks including a plurality of ECC data units, the ECC result indicators respectively indicating whether the plurality of ECC data units included in the plurality of data chunks has an uncorrectable ECC error; and an uncorrectable error counter configured to calculate a number of ECC result indicators indicating an uncorrectable ECC error among ECC result indicators corresponding to ECC data units having a same order in each of the plurality of data chunks.

